

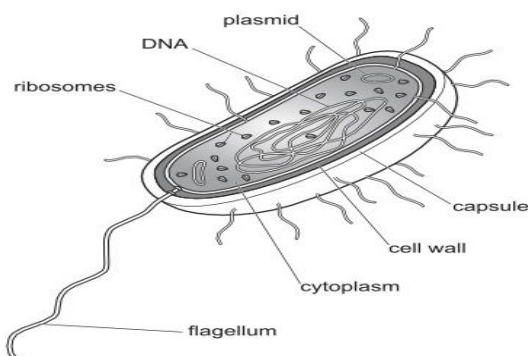
UGANDA CERTIFICATE OF LOWER SECONDARY EDUCATION

S.1 BIOLOGY THEORY

DURATION:1.5HOURS

INSTRUCTIONS: ANSWER ALL QUESTIONS.

1. Bacteria are microscopic organisms which are very diverse and almost found everywhere. Some are important in food industry, improving soil fertility, enzyme production, cleans the environment etc. However, a vast of bacteria cause diseases to animals and man. The diagram is of *Vibrio cholera*, the bacterium that cause cholera and the vector that spreads it.



- (a) state two similarities and two differences between a palisade mesophyll cell and the bacterium cell. (04marks)

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(b)state two features of bacteria.

(02marks)

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(c)Describe the role of bacteria in any two importances mentioned above.

(03marks)

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d) Describe three ways the features of the vector enable it to transmit the bacteria.

(03marks)

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e) How are the harmful stages of the above vector controlled in your community?

(03marks)

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2. Cassava plant, *Manihot esculenta* produces root tuber which is the major source of fibre and carbohydrates in many families in Uganda due to the less requirements it requires to grow, its high productivity and tolerance to dry conditions. During a research study in some village, it was noted that the major cause of low cassava productivity is infection with a viral disease, Cassava mosaic which cause twisting of leaflets reducing leaf area exposed to light and amount of food manufactured by the plant.



- a) state the
- i) Kingdom.....
 - ii) Class.....
 - iii) Genus
 - iv) Species of the cassava plant.....

(03marks)

b) Describe how cassava mosaic is spread and the ways farmers in your community are preventing its spread and effects.

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(07marks)

3. Insects are diverse and play several vital roles in the life of other organisms. They share several structural features on their bodies some of which have made them to be the most successful organisms on Planet Earth.



a) State three similarities between the above three insects. (03marks)

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b) Describe any two vital roles insects play in lives of other organisms.

(04marks)

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c) Using observable features on the insects above construct a
dichotomous key to identify the above insects.

(04marks)

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END

BABALANDA